FUTURAL

FABRICATION AND HANDLING GUIDELINES

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FABRICATION AND HANDLING GUIDELINES

This is a general guideline for fabricators and contractors, it is not meant to be a definitive statement as circumstances frequently change and are often project specific.

We recommend that you always take into account the current building and safety regulations, or contact us for advice.

All materials should be handled in a safe manner using the appropriate protective equipment.

General Guidance

- Considerable care should be taken in the handling of Futural.
- Futural panels are sensitive to impact, particularly shocks from small, hard objects, which can dent the aluminium.
- A minimum of two people should be used when sliding large sheets to avoid scratching.
- To prevent surface damage when stacking Futural, there should be nothing between the panels.
- Futural should be stored in a cool and dry area where temperature is relatively stable.
- Pallets of Futural should be stored horizontally with adequate support to prevent sagging.
- Stacked pallets should be identically sized and not more than four (4) pallets high. Avoid using tapes, silicone, polyurethane or permanent marks on the film as they may penetrate the film and damage the coating.
- The protective film must be removed within a 3-month period of fabrication and installation

Fabrication

Futural solid aluminium sheets can be fabricated by using techniques and machinery that have been familiar to the facade industry over many years.

It is recommended that all panels are checked for defects before the commencement of machining. Do not fabricate damaged sheets unless the affected section can be removed.

It is also recommended that the fabrication is conducted in a workshop for the majority of the project, but small quantities of panel production can be conducted on site.

Transitioning from the fabrication of composite materials to solid aluminium will take some trial and error. We strongly recommend that fabricators conduct preliminary trials to determine the speeds, tooling and setting required for their machinery.

CNC Router

A V-groove with a flat base of 3mm is recommended to a maximum depth of 2.2mm. Spindle rotation speeds and feed rates are machine dependant and should be discussed with machine manufacturers. A lubricant mister is recommended when fabricating Futural. For optimum fabrication results, we recommend consulting machine manufacturers and tooling supply companies.

Folding

After the V-groove has been formed, fold the return leg back in one movement.
It is recommended that a portable folding tool be used for small panels and a folding machine/bed for larger format panels. The initial folded angle should slightly more than the final angle required.

Bending

As an alternative to V-grooving and folding, Futural can be formed into cassettes using a press brake to create the 90° bend.

Circular Saw

For best results, a track guided circular saw is recommended. It is important to discuss blade selection with manufacturer. Hand folding is generally achievable without the need for bending equipment. A depth gauge roller suitable for 3mm thickness may be required.

Vertical Panel Saw

This type of saw can cut and route Futural. Please seek manufacturer's advise in the selection of an appropriate blade. Existing vertical saws can be retro fitted with a variable speed driver controller and lubricant misting equipment. When creating a V-groove for folding, the minimum thickness left in the bottom of the groove should be 0.8mm.

Shearing

Futural can be guillotined to the required size. Ensure the cut material is captured to prevent damage.

Roll Bending

To create curved surfaces, use a suitable bending machine. Safeguard the material by maintaining the protective film. Make certain the rollers are clean and dent-free. The minimum bending radius should be no more than 15 times the thickness.

Drilling

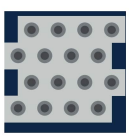
A high quality HSS centre point drill bit is suitable for drilling Futural.

Fixing

You can rivet Futural using blind and solid rivets. Always consider the effects of thermal expansion and potential building movement. Stainless steel screws should be used with all Futural products. Always consider the effects of thermal expansion and the possibility of building movement.

Welding

The common methods for welding Futural are TIG and MIG. It is recommended to consult with your local welding specialist for advice.



Perforating

Futural can be perforated by punching, drilling or milling. Contact us to discuss the pattern and open area you are seeking to achieve.

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